

/organism="Heterosigma akashiwo"  
/db\_xref="taxon:2829"  
/note="Isolated from red-tide sea water in Masan Bay,  
Korea; classified by morphological studies"  
<1..>712  
/note="variable domains D1 and D2"  
/product="24S large subunit ribosomal RNA"  
BASE COUNT 164 a 149 c 211 g 188 t  
ORIGIN

Query Match 100.0%; Score 23; DB 8; Length 712;  
Best Local Similarity 100.0%; Pred. No. 0.15;  
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ACCACGACTGAGCAGCACCTTT 23  
|||||  
Db 149 ACCACGACTGAGCAGCACCTTT 127

RESULT 2  
AF086948/c 713 bp DNA linear PLN 15-OCT-1998  
LOCUS  
DEFINITION Heterosigma akashiwo large subunit ribosomal RNA gene, partial  
sequence.  
ACCESSION AF086948  
VERSION AF086948.1 GI:3695263  
KEYWORDS  
SOURCE Heterosigma akashiwo.  
ORGANISM Heterosigma akashiwo  
REFERENCE Eukaryota; stramenopiles; Raphidophyceae; Heterosigma.  
AUTHORS Connell, L.  
TITLE Direct Submission  
JOURNAL Submitted (26-AUG-1998) Environmental Conservation Division,  
National Marine Fisheries Service, 2725 Montlake Blvd East,  
Seattle, WA 98112, USA

FEATURES  
source  
1..713  
/organism="Heterosigma akashiwo"  
/strain="CCMP-452"  
/db\_xref="taxon:2829"  
<1..>713  
/note="contains variable domains D1-D3"  
/product="large subunit ribosomal RNA"  
BASE COUNT 165 a 148 c 210 g 190 t  
ORIGIN

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Best Local Similarity 100.0%; Pred. No. 0.15;  
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ACCACGACTGAGCAGCACCTTT 23  
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Db 147 ACCACGACTGAGCAGCACCTTT 125

RESULT 3  
AF210741/c 715 bp DNA linear PLN 02-JAN-2001  
LOCUS  
DEFINITION Heterosigma akashiwo large subunit ribosomal RNA gene, partial  
sequence.  
ACCESSION AF210741  
VERSION AF210741.1 GI:12003313  
KEYWORDS  
SOURCE Heterosigma akashiwo.  
ORGANISM Heterosigma akashiwo  
REFERENCE Eukaryota; stramenopiles; Raphidophyceae; Heterosigma.  
AUTHORS Tyrell, J.V., Scholin, C.A., Bergquist, P.R. and Bergquist, P.L.  
TITLE Detection and Enumeration of Heterosigma akashiwo and Fibrocapsa  
japonica (Raphidophyceae) Using rRNA-Targeted Oligonucleotide  
Probes  
JOURNAL Unpublished

REFERENCE 2 (bases 1 to 715)  
AUTHORS Tyrell, J.V., Bergquist, P.R., Mackenzie, L. and Bergquist, P.L.  
TITLE Phylogeny of the Raphidophytes Based on Large-Subunit rRNA Gene  
Sequences  
JOURNAL Unpublished  
REFERENCE 3 (bases 1 to 715)  
AUTHORS Tyrell, J.V., Bergquist, P.R., Mackenzie, L. and Bergquist, P.L.  
TITLE Direct Submission  
JOURNAL Submitted (02-DEC-1999) Research and Development, Monterey Bay  
Aquarium Research Institute, 7700 Sandholdt Road, Moss Landing, CA  
95039-0628, USA

FEATURES  
source  
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/strain="CAMR05"  
/db\_xref="taxon:2829"  
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/note="D1 and D2 domain"  
/product="large subunit ribosomal RNA"  
BASE COUNT 166 a 148 c 212 g 189 t  
ORIGIN

Query Match 100.0%; Score 23; DB 8; Length 715;  
Best Local Similarity 100.0%; Pred. No. 0.15;

QY 1 ACCACGACTGAGCAGCACCTTT 23  
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Db 149 ACCACGACTGAGCAGCACCTTT 127

RESULT 4  
AF211256/c 715 bp DNA linear PLN 11-JAN-2001  
LOCUS  
DEFINITION Heterosigma sp. CAMR10 large subunit ribosomal RNA gene, partial  
sequence.  
ACCESSION AF211256  
VERSION AF211256  
KEYWORDS  
SOURCE AF211256.1 GI:12082493  
ORGANISM Heterosigma sp. CAMR10.  
REFERENCE Heterosigma sp. CAMR10.  
AUTHORS Eukaryota; stramenopiles; Raphidophyceae; Heterosigma.  
TITLE 1 (bases 1 to 715)  
Tyrell, J.V., Scholin, C.A., Bergquist, P.R. and Bergquist, P.L.  
Detection and Enumeration of Heterosigma akashiwo and Fibrocapsa  
japonica (Raphidophyceae) Using rRNA-Targeted Oligonucleotides  
Unpublished  
2 (bases 1 to 715)  
Tyrell, J.V., Bergquist, P.R., Mackenzie, L. and Bergquist, P.L.  
Phylogeny of the Raphidophytes Based on Large-subunit rRNA Gene  
Sequences  
JOURNAL Unpublished  
REFERENCE 3 (bases 1 to 715)  
AUTHORS Tyrell, J.V., Bergquist, P.R., Mackenzie, L. and Bergquist, P.L.  
TITLE Direct Submission  
JOURNAL Submitted (03-DEC-1999) Research and Development, Monterey Bay  
Aquarium Research Institute, 7700 Sandholdt Road, Moss Landing, CA  
95039-0628, USA

FEATURES  
source  
1..715  
/organism="Heterosigma sp. CAMR10"  
/strain="CAMR10"  
/db\_xref="taxon:147349"  
/note="similar to Heterosigma akashiwo sequence AF210741"  
<1..>715  
/note="D1 and D2 domains; similar to Heterosigma akashiwo  
sequence presented in GenBank Accession Number AF210741"  
/product="large subunit ribosomal RNA"  
BASE COUNT 166 a 148 c 212 g 189 t  
ORIGIN

Query Match 100.0%; Score 23; DB 8; Length 715;  
Best Local Similarity 100.0%; Pred. No. 0.15;

GenCore version 5.1.3  
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OM nucleic - nucleic search, using sw model

Run on: October 17, 2002, 08:07:35 ; Search time 978.267 Seconds  
(without alignments)  
492.003 Million cell updates/sec

Title: US-09-780-113d-15  
Perfect score: 23  
Sequence: 1 accacgactgacgacacccctt 23

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 1797656 seqs, 10463268293 residues  
Total number of hits satisfying chosen parameters: 3595312

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000  
Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :  
1: gb\_da:\*  
2: gb\_hgt:\*  
3: gb\_in:\*  
4: gb\_cm:\*  
5: gb\_ov:\*  
6: gb\_pat:\*  
7: gb\_ph:\*  
8: gb\_pl:\*  
9: gb\_pr:\*  
10: gb\_ro:\*  
11: gb\_sts:\*  
12: gb\_sy:\*  
13: gb\_un:\*  
14: gb\_vl:\*  
15: em\_da:\*  
16: em\_fun:\*  
17: em\_hum:\*  
18: em\_in:\*  
19: em\_mu:\*  
20: em\_om:\*  
21: em\_or:\*  
22: em\_ov:\*  
23: em\_pat:\*  
24: em\_ph:\*  
25: em\_pl:\*  
26: em\_ro:\*  
27: em\_sts:\*  
28: em\_un:\*  
29: em\_vl:\*  
30: em\_hgt\_hum:\*  
31: em\_hgt\_inv:\*  
32: em\_hgt\_other:\*  
33: em\_hgtg\_inv:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result Query  
No. Score Match Length DB ID Description

C	1	23	100.0	712	8	AF042820	AF042820 Heterosig
C	2	23	100.0	713	8	AF086948	AF086948 Heterosig
C	3	23	100.0	715	8	AF210741	AF210741 Heterosig
C	4	23	100.0	715	8	AF211256	AF211256 Heterosig
C	5	23	100.0	4103	8	AF409124	AF409124 Heterosig
C	6	18.2	79.1	126149	9	AC006352	AC006352 Homo sapi
C	7	18.2	79.1	169710	2	AL627202	AL627202 Homo sapi
C	8	18.2	79.1	188930	2	AL592114	AL592114 Homo sapi
C	9	18.2	79.1	197083	2	AC091106	AC091106 Mus muscu
C	10	18.2	79.1	214025	2	AC007882	AC007882 Homo sapi
C	11	18.2	79.1	227856	2	AC007908	AC007908 Homo sapi
C	12	18.2	79.1	234542	9	HUAC002041	AC012495 Homo sapi
C	13	17.8	77.4	215359	9	CNS000VE	AL096807 Homo sapi
C	14	17.4	75.7	34105	2	AC021605	AC021605 Homo sapi
C	15	17.4	75.7	197654	2	AC021605	AC021605 Homo sapi
C	16	17.2	74.8	26889	9	AL499629	AL499629 Human DNA
C	17	17.2	74.8	43772	9	AC004791	AL359434 Human DNA
C	18	17.2	74.8	46708	9	AL359434	AL359434 Human DNA
C	19	17.2	74.8	73806	2	AC095461	AC095461 Rattus no
C	20	17.2	74.8	75108	2	AC005363	AC005363 Homo sapi
C	21	17.2	74.8	80658	9	AC005606	AC005606 Homo sapi
C	22	17.2	74.8	81579	9	AE006640	AE006640 Homo sapi
C	23	17.2	74.8	107549	9	AC074178	AC074178 Homo sapi
C	24	17.2	74.8	123331	9	AC005164	AC005164 Homo sapi
C	25	17.2	74.8	128628	9	AC093758	AC093758 Homo sapi
C	26	17.2	74.8	163031	9	AC024947	AC024947 Homo sapi
C	27	17.2	74.8	163889	2	AC004958	AC004958 Homo sapi
C	28	17.2	74.8	175996	2	AC010539	AC010539 Homo sapi
C	29	17.2	74.8	184919	9	AF069291	AF069291 Homo sapi
C	30	17.2	74.8	207962	2	AC015679	AC015679 Homo sapi
C	31	17.2	74.8	238169	2	AC091396	AC091396 Mus muscu
C	32	17.2	74.8	242965	2	AC023175	AC023175 Mus muscu
C	33	17.2	74.8	320250	9	AF117829	AF117829 Homo sapi
C	34	17	73.9	154921	2	AC109793	AC109793 Bos tauru
C	35	17	73.9	205140	2	AC109795	AC109795 Bos tauru
C	36	17	73.9	335372	2	AC094935	AC094935 Rattus no
C	37	16.8	73.0	280	9	HSCRMPO6	AF096145 Homo sapi
C	38	16.8	73.0	355	13	AF349055	AF349055 Unculture
C	39	16.8	73.0	42856	2	AC100075	AC100075 Mus muscu
C	40	16.8	73.0	110000	2	AC105915	AC105915 Homo sapi
C	41	16.8	73.0	110000	2	AC005079_2	AC005079 Homo sapi
C	42	16.8	73.0	121459	2	AL137860	AL137860 Homo sapi
C	43	16.8	73.0	168042	2	AC022529	AC022529 Homo sapi
C	44	16.8	73.0	170128	2	AC005059	AC005059 Homo sapi
C	45	16.8	73.0	175390	2	AC094641	AC094641 Rattus no

ALIGNMENTS

RESULT 1  
LOCUS AF042820/c 712 bp DNA linear PIN 01-FEB-1998  
DEFINITION Heterosigma akashiwo 24S large subunit ribosomal RNA-gene, partial  
sequence.  
ACCESSION AF042820  
VERSION AF042820.1 GI:2827390  
KEYWORDS  
SOURCE Heterosigma akashiwo.  
ORGANISM Heterosigma akashiwo.  
REFERENCE 1 (bases 1 to 712)  
AUTHORS Lee,S.W., Park,C.G. and Park,Y.S.  
TITLES 24S ribosomal RNA sequence analysis of dinoflagellates isolated from red-tide in southern coast of Korea  
JOURNAL Unpublished  
REFERENCE 2 (bases 1 to 712)  
AUTHORS Lee,S.W., Park,C.G. and Park,Y.S.  
TITLES Direct Submission  
JOURNAL Submitted (14-JAN-1998) Department of Microbiology, Inje University, Gwangju 607, Kihnae 621-749, Korea  
FEATURES  
source 1..712